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NEW NOCTUIDS FOR 1903, No. 4, WITH NOTES ON CERTAIN DESCRIBED SPECIES.

BY JOHN B. SMITH, SC.D.

The first paper of this series is in the Can. Ent., xxxv, pp. 9-15, and 6 species are there described; the second is in the Journal of the New York Ent. Soc., xi, p. 1-23, and 21 species are there described. In the present paper 34 new names are proposed, and there are critical notes on the species of *Raphia*, *Fishia* and *Acontia*. It was intended to add to this a revision of the species belonging to the Eucalypterid series; but a fire in my laboratory destroyed some of my notes and disarranged the material to such an extent that it will be impossible to do systematic work for some time to come.

Under the circumstances it was deemed best to present the species already in manuscript in this paper.

Notes on the Species of RAPHIA Hbn.

For many years two species of *Raphia* only were in our collections—*abrupta* Grt. and *frater* Grt. Both of these are eastern species, and, while they are undoubtedly distinct, it is not always easy to separate them. *Frater* is common and variable; *abrupta* is rare and its range of variation not yet understood. Quite usually a somewhat obscurely marked *frater* does duty for *abrupta*, of which I have only one pair in my collection at present. The ♀ is from Brazos County, Texas, and the female from Colorado; which does not accord at first blush with the term "eastern species;" nevertheless, the faunal region is really the same.

Abrupta may be most readily distinguished by the dusky secondaries of both sexes, and in this it differs from all the other species. In addition, the ground color is a dull obscure gray as compared with the dark rather clear gray of *frater*. In the ♂, *abrupta* is narrower winged, the outer portion of the wing is paler beyond the t. a. line and above the claviform, the claviform itself is well marked and extends to the t. p. line. In the ♀ these characters are obscure and, except for the dusky secondaries, it would be difficult to distinguish from *frater*.

Frater has the primaries uniformly gray, and all the maculation is rather evenly relieved, though by no means prominent or contrasting. The specimens before me range from Ontario, Canada, to Winnipeg, Manitoba; south to Denver, Colorado, and east to New Jersey. While there is considerable difference in appearance, there is no variation in the essential characters.

In 1886 Mr. Putman Cramer described *R. coloradensis* as a variety of *frater*, and so it remained until Dr. Dyar in his catalogue of 1902 correctly listed it as a good species. The type of maculation is like *frater* in all essentials; but instead of an even dark gray the primaries are mottled. The ground color is much paler, rather whitish in fact, with a slight tendency to a yellowish suffusion, while the maculation is much more contrasting. In general the base and lower half of the median space are heavily black powdered, while the remainder of the wing is whitish; a blackish patch marking the inception of the median shade on the costa and usually some sort of dusky spot indicating the reniform. There is a tendency to lose the orbicular, while the claviform is well marked. I have one female from Phoenix, Arizona, and the balance of my series is from Colorado, partly of Mr. Bruce's collecting, partly from Prof. Gillette, and partly of the Hulst material. The Arizona example is dated January 11th, the others are not dated, nor have any of them specific localities.

Also in 1886, and only a month or two later than the description of *coloradensis*, Mr. Henry Edwards published *Raphia pallula* from California as a good species, apparently without a knowledge of Mr. Cramer's species. In my list of 1891 I made this a synonym of *coloradensis*, and so it remains in Dr. Dyar's catalogue. I have recently re-examined the types, which are now in the American Museum of Natural History. There are two specimens, both females, and while fully expanded, they suggest cripples; possibly because the primaries are so very broad, and the secondaries are proportionally smaller than in the other species. The yellow suffusion is here in the disc of the primaries involving the upper part of the median space in which the black filled reniform stands out prominently, while the orbicular is altogether lost. The terminal space is dark, and in this particular it differs from all the *coloradensis* now at hand. The examples are: one from Soda Springs, the other from Siskiyou County, California. I have nothing that agrees with these speci-

mens now before me, and I have had none from other sources. The resemblance to *coloradensis* is marked, and had I received such specimens from Colorado, I would have had no hesitation in placing them as aberrant or discolored examples of that species. Under the circumstances, since there is really nothing to show that the distinctive characters are not permanent, it will be better to restore Mr. Edwards' name to specific standing.

For some time I have had in my collection three examples of another species from Los Angeles County, California, differing from all the others in the very even and very powdery light gray primaries on which the markings are only a little relieved. In the even color it differs from *coloradensis*, and in the very light powdery gray it differs from *frater*. From all the species it differs in the practical absence of the claviform which is barely indicated in only one example. There are other differences in detail which convince me that a good species is under observation, and to this I have applied the name *cinderella*.

***Raphia cinderella* n. sp.**—Very pale ashen gray, powdery; tending toward a yellowish suffusion, the markings blackish, not contrasting. Head with a dark line across the front and another on the vertex. Collar with a dark line across the middle and another at tip. Patagia margined with blackish, and the posterior thoracic vestiture dusky. The disc of the patagia yellowish. Primaries with all the maculation present, darker than the ground, not contrasting and sometimes almost lost in the general gray powdering. The tendency to yellow tinting is mainly in the basal and s. t. space, while the blackish powderings tend to mass along the inner margin. Basal line obscure, usually marked as a dusky spot on the median vein at base. T. a. line geminate, the component parts widely separated, inwardly oblique to the submedian vein, then with a long outcurve to the inner margin near its middle. T. p. line geminate, even, slender, the outer part obscure; rarely evenly and not deeply bi-sinuate, the course as whole parallel to the outer margin. There is a diffuse, irregular, broken median shade, best marked by a dusky spot on the costa, obviously but less distinctly below the submedian. S. t. line whitish, relieved by an irregular preceding dark shade in the s. t. space. A series of blackish terminal lunules. The fringes are dusky, cut with whitish opposite the veins. Orbicular round, moderate in size, consisting of a dusky annulus which may or may not have a central dot in the inclosed area. Reniform varying in size and somewhat in shape, with a dark outline and a dark central lunule which may extend to fill the entire spot. Secondaries white, with a series of blackish terminal lunules, and a blackish spot at the anal angle. Beneath white, powdery; primaries with a vague tendency to reproduce the most obvious markings of the upper side, especially the reniform; secondaries with a small discal lunule. Expands 1.36-1.48 inches = 34-37 mm.

Hab.—Los Angeles County, California, in May.

Three male examples are now before me, two taken by myself and one by Mr. Coquillett. The latter is from National Museum material in which the species is represented by additional specimens. The characters differentiating the species have been already commented upon.

Hadena tonsa Grt., Can. Ent., xii, 214, 1880.

This species I saw in the British Museum in 1891, and it was at that time unknown to me. Examples came to hand in 1898, but I failed to recognize them and redescribed the species as *Hadenella subjuncta* in the Can. Ent., xxx, 323. A re examination of the type of *tonsa* in 1890 suggested the above synonymy which was confirmed by a comparison of my material later. Mr. Grote's example came from Nevada; the material at present in my collection is from Washington and Calgary; I believe I have seen examples also from Colorado, but have seen no eastern examples.

In Dr. Dyar's Catalogue, Bull: U. S. Nat. Mus., No. 52, p. 108, *minuscula* Morr. is placed in *Hadenella*, with *subjuncta* as a synonym. *Orthosia minuscula* Morr., referred to *Parastichitis* by Mr. Grote and later to *Hadena* by myself, has absolutely nothing in common with *tonsa* (*subjuncta*); not even wing-form. It does not belong to *Hadenella*, is a medium sized, broad winged, red brown species, with very simple maculation, and belongs to the fauna of the North Atlantic States. The type is in the Tepper collection, and I have recently seen the species in the Mus. Comp. Zool., from the Thaxter collection.

Hadena exhausta n. sp.—Ground color a pale creamy gray, varying a little toward a brownish shading. Head with a black or brown line across the front, and another on the vertex. Collar with a black or brown transverse median line. Thoracic vestiture brown tipped. Primaries with the broad basal space gray; the median space which narrows greatly toward the inner margin is brownish or blackish, varying in shade but not striking in contrast; the s. t. space is gray, interrupted in the submedian interspace by a black shade line which continues from a black shade connecting the median lines to the outer margin above the hind angle. Terminal space variably dark shaded. Basal line geminate, obvious only across the costal area. T. a. line well removed from base, geminate; inner line marked on costa and traceable part way across the wing by brown scales; outer line slender, black; included space whitish, or at least paler gray; as a whole the line is obliquely outcurved or almost evenly oblique to the internal vein, reaching the inner margin only a little within the middle. T. p. line geminate, the component lines widely separated, included space whitish or

lighter gray; inner line black or blackish tending to become discontinuous; outer line punctiform, more or less incomplete; as a whole the line is broadly outcurved over the cell, then inwardly oblique to the internal vein where it approaches nearest to the t. a. line. S. t. line somewhat diffuse, smoky, only a little irregular, more or less emphasized by venular dots or shades which sometimes extend toward the outer margin, darkening the terminal shade. A black lunate terminal line. Fringes with a smoky, lunate interline, the margin a little scalloped. Orbicular absorbed in the basal space, the outline of the outer margin forming a little irregularity in the t. a. line. Reniform large, broad, kidney shaped, more or less completely outlined by black scales, within which is a paler annulus; the spot as a whole of the ground color but more or less marked with smoky brown. Claviform short, broad, outlined by black scales, suffused by a blackish or brown shade which crosses the median space above a narrow black connecting line. The internal vein is white through the median space and cuts both median lines, which diverge below it, forming at this point the narrowest portion of the space. Secondaries smoky, glossy, with a vague outer line. Beneath powdery gray; primaries tending to smoky; secondaries with an exterior smoky line and discal dot. Expands .88 inch = 22 mm.

Hab.—New Windsor, N. Y., July 9, 29 (Miss. Emily L. Morton); Schenectady, N. Y. (Lintner).

This species occurs throughout the North Atlantic States, but is not common. It is the species that I have called *hausta* in my own and other collections for years.

My original specimen came to me years ago in such a way that I believed the determination has been made by Mr. Grote, and a hasty reading of the original description which compared the species to *modica* did not raise any doubts as to the correctness of the name. More recently Mr. Merrick sent me from New Brighton, Pa., specimens that seemed closely allied and familiar in appearance; but I could not then recognize the form and sent it back unnamed. In the U. S. Nat. Mus., I again saw the two forms associated in such a way as to bring out the contrasts between them and to make it certain that two species were at hand.

Comparing Mr. Grote's original description carefully, developed the fact that Mr. Merrick's examples are the true *hausta*, while the *hausta* of my collection seems to be an unnamed form. It can be readily recognized by the broad creamy gray basal space, the V shaped darker median space, and the black line extending across the s. t. space in the submedian interspace. In *hausta* the base of the wing is brown and everything beyond the middle is creamy gray. Seen apart, the two species give a very similar impression; seen in comparison their difference is obvious.

Leucania texana Morr., Proc. Bost. Soc. Nat. Hist., xvii, 211, 1874.

Mr. Morrison refers under this name to what he considered a variety of *L. phragmatidicola* from Texas, and gives dates for the specimens. In my recent revision of the species of *Leucania* I quoted the essential parts of Mr. Morrison's description; but failed to identify it with any form of the species to which it was referred as a variety. It seemed scarcely credible that Mr. Grote's suggestion as to the species could be correct, especially as he gave the name *ligata* to the form he thought Mr. Morrison might have had before him. In looking over the material in the Cambridge collection recently, I found a small series of specimens labelled *phragmatidicola* var. in Mr. Morrison's handwriting, and three of these examples agree in locality and dates with the facts stated in the description of *texana*. The specimens came from Belfrage, are from the Peabody collection, and without any doubt the specimens Mr. Morrison had before him when he wrote; in other words, they are the types of *Leucania texana* Morr. They prove that Mr. Grote was correct in his surmise, and that *texana* Morr. is really the same as *ligata* Grt. The latter name must sink as a synonym and *texana* must take specific rank in its place.

Leucania flabilis Grt., Can. Ent., xiii, 15, 1881.

This species was described from Long Island, and up to this year I had seen only the typical examples from the Tepper collection. Recently, while looking over the collection of Mr. Philip Laurent, at Mt. Airy, Philadelphia, I was delighted to find a series of eight or more specimens collected at Anglesea, N. J., late in July (21st), and early in August (4th). They were taken at sugar, most of them are females, and all are in very fair condition. None of the specimens are quite as red or quite as well marked as normal *ligata*, though coming from Texas, at least one of the examples would pass as such without question. But, on the other hand, in the four examples now before me there is one that agrees perfectly with *L. rimosa* Grt., as represented in an example from Kittery Point, Maine, kindly sent me by Dr. Thaxter. *L. rimosa* was described in the Can. Ent., xiv, 216, 1882, and must be referred as a synonym of *flabilis*. The relation of the latter species to *ligata* yet remains to be determined.

Neleucania prægracilis Grt., Bull. U. S. Geol. Surv., iii, 119, 1877.

Mr. Henshaw has determined that the specimen labelled *Helicophila gracillima*, type in the Cambridge collection is really the type of *prægracilis* and has so recorded it; I have no doubt correctly.

Leucania rufostriga Pack.

On the basis of a comparison made by Mr. Henshaw I omitted this species from *Leucania* in my recent revision and suggested that my *Caradrina punctivena* might be conspecific. I examined Dr. Packard's type myself recently, and found that at least it was not a *Leucania*. It is a horribly faded specimen, and while it is no doubt very close to *C. punctivena*, I am not so certain that it is really the same species. If material could be obtained for comparison from Labrador, it would be an easily settled question.

Mamestra artesta n. sp.—Ground color a grayish red or purple-brown, over a whitish base, giving a peculiar dead appearance. Head concolorous, antennæ whitish. Thorax with tip of collar usually whitish, and with patagia and disc more or less whitish powdered. Primaries with the median lines lost, except on the inner margin; ordinary spots white marked, and the entire wing with a more or less mottled appearance. Basal line white, more or less broken, and sometimes a little emphasized by darker scales. T. a. line very much broken, yet some part of it is visible in each specimen; usually it is a sinuate brown line through a whitish shade on the inner margin and over the submedian vein; sometimes there is a diffuse white line through the cell, and occasionally this extends to the costa. T. p. line evenly outcurved over the cell, and a little incurved below; it may consist of a single or a double series of white dots, or of a whitish shade in which a very narrow black zig-zag line appears, and it is always marked in brown on the submedian vein and on inner margin. S. t. line white, more or less contrasting, irregular, broader at anal angle, rarely lost in part. Claviform wanting. Orbicular small, round, usually consisting only of a white annulus, rarely emphasized by an outer ring of darker scales. Reniform upright or a little oblique, moderate in size, broad, centrally constricted, white ringed and with a whitish central line. There is a series of white terminal dots on the veins. Secondaries soiled whitish, veins darker and with a narrow, smoky outer shading. Beneath whitish, a powdering of carmine scales over the costal and apical region, a more or less obvious outer shade band and a dusky discal spot on all wings. Tarsi annulate with white. The entire body tending to purplish, but variable in the direction of a yellowish ground. Expands 1.40-1.76 inches = 35-44 mm.

Hab.—Glenwood Springs, Colorado, in August (Dr. Barnes); Douglas County, Kansas, at electric light, May (Prof. Snow).

Two males and three females in good condition are before me and I have seen other examples, mostly from Colorado. I have an example marked "Pennsylvania," and another marked "Illinois;" but I doubt the correctness of the labels, though I cannot disprove

them and the species may really range east. I have heretofore regarded this species as a form of *congermana* Morr., and have so named it in collections. The receipt of additional material proves them distinct. The peculiar, dead, chalky tinge of the primaries is distinctive of the new species, and to this should be added the much more pointed shape of these wings.

Dr. Barnes long since suggested the separation of the Colorado species; but I was unwilling to do so until I had better material of *congermana*. Of the dull yellow shade at the apex and inner angle of Mr. Morrison's species no trace appears in any example of *artesta*.

Trichelea nova n. sp.—Ground color pale grayish luteous, with a variably marked reddish tint. Head and thorax immaculate, save for a variable powdering of black scales which are most obvious on the thoracic disc. Primaries powdered with black or smoky scales irregularly distributed, so as to give the wing a mottled and suffused appearance. The normal maculation is all present, not contrasting, more or less broken and sometimes obscured. Basal line geminate, usually well marked in its entire course. T. a. line geminate, the inner part tending to become vague and obscured; as a whole outwardly oblique, irregularly outcurved in the interspaces. T. p. line geminate, outer portion obscure, inner part lunulate or crenulate, also tending to become lost so as to leave a series of black venular marks emphasized by following white dots; as a whole the line is moderate outcurved over the cell and only a little incurved below it. S. t. line pale, broken, irregular, sometimes emphasized by preceding darker shades and spots, sometimes by dusky cloudings in the terminal space. A series of blackish terminal lunules. Fringes with a dusky interline, cut with white opposite the veins, the margins just a little notched. All the veins more or less obviously dusky, the median vein sometimes quite markedly so. Claviform small, with a variably evident dusky outline. Orbicular small, oval, with a darker outline, a pale annulus within this and a dusky centre; the latter may be lacking, leaving the entire spot a little paler than the ground color. Reniform large, broad, filled with blackish, a little constricted centrally; a pale annulus within a border of blackish scales defines the spot at the sides, the upper and lower margins tending to become obscure. An obscure smoky median shade band is visible below the dark reniform. Secondaries pellucid white at base, becoming smoky toward the margins; more so in the female than in the male. Beneath white, powdery; primaries with veins marked outwardly; a series of blackish venular marks representing the t. p. line; a dark lunule, the reniform spot; while a pale s. t. line is obvious through an outer dusky margin. Secondaries with the veins smoky, a small dark discal spot and a narrow smoky outer border. Expands 1.40-1.52 inches = 35-38 mm.

Hab.—Tucson, Arizona, March 17 (S. T. Kemp); Mesilla Park, New Mexico, March (T. D. A. Cockerell); Phoenix, Arizona, November 10th (Dr. Griffiths); Southern Arizona, April 1-15th (Poling).

Six examples, in fair to good condition, are at hand. The species runs somewhat larger than those heretofore described and is recognizable by the peculiarly mottled appearance and tendency to a reddish tint. In the latter character it approaches *decepta*; in the others it resembles *antica* and *postica* more closely. *Edwardsii* is very distinct from all the others by its uniform tinge on which the maculation is not relieved. *Antica*, *postica* and *nova* are close allies, but I believe good species. With a series at hand for comparison the differences are marked, and the male genitalia serve to emphasize these differences. These structures were figured for *edwardsii* and *decepta* in the Proc. U. S. Nat. Mus., xii, pl. 22, figs. 18 and 19. Those of the other species referred to are herewith given on pl. iii, figs. 1-12.

Sir George F. Hampson has called my attention to the fact the *Mamestra fuscolutea* is a *Trichoclea* in structure and must be referred to that genus. The fact was verified too late to include the results of genitalic study here.

Tæniocampa columbia Sm., Proc. U. S. Nat. Mus., x, 472, 1887.

This species was described out of the Neumogen collection from specimens taken by Capt. Geddes in 1884. The material was somewhat unsatisfactory, and the generic reference was doubtfully made. In the revision of *Tæniocampid* genera, Proc. U. S. Nat. Mus., xii, 1889, the relationship of the species to *Mamestra* was recognized, but the balance of characters seemed then to point to *Tæniocampa*. Recently, Mr. Dod sent me from Calgary a series of specimens collected in July, whose relationship to *Mamestra meditata* was at once apparent, but the species was marked as distinct. In looking over the collection of the U. S. Nat. Mus., I recognized in the typical example of *T. columbia* the species sent me by Mr. Dod. A study of the genitalia, which were compared with fig. 5, pl. xxiii, Proc. U. S. Nat. Mus., xii, proved the identification correct and makes it necessary to transfer the species to *Mamestra*. It must be *M. columbia* hereafter, and in the arrangement the form must stand next to *meditata*.

The series of twelve examples now before me shows a considerable range of variation; not only in general color, but in the distinctness of the maculation. The normal rusty *Tæniocampid* brown predominates, and the range is from a decidedly yellowish shading to a very

pretty pinkish tinge; never so dark as in the eastern form. The maculation is sometimes almost washed out; at others the primaries are mottled and all the ordinary spots are clearly traceable. The median lines may be nearly lost, may appear simple, or the t. p. may be crenulated; some forms coming so close to *Teniocampa rufula* in the markings that a reference there appears most natural on that basis.

Notes on the Species of FISHIA Grt.

The genus *Fishia* was described by Mr. Grote in 1877, Can. Ent., ix, 21, with essential characters as follows:—Tibiæ armed; eyes lashed; antennæ of male brush-like; wing-form like *Mamestra sub-juncta*; primaries widening outwardly; thorax with a posterior tuft and the base of the abdomen strongly tufted; fore tibiæ appear to be unarmed; tongue weak. Mr. Grote said further, in comment, that the genus thus combined characters of *Hadena* with those of *Agrotis*, and described *E. enthea* from Oldtown, Maine.

I saw this species in the British Museum collection in 1891, and record it in my catalogue, p. 167, as one I had not previously seen. It impressed me then as related to *Hadena evelina* French, and as a *Hadena* with brush like antennæ. For some years I have had in my collection a species from the Province of New Brunswick doubtfully referred under this name. In 1900 I saw the type again, recognized its dissimilarity to my specimens and noted that the species, though much darker, must be compared with *Aporophyla yosemitæ* Gr.

In 1873 Mr. Grote described *Cucullia yosemitæ* in the Bull. Buff. Soc. Nat. Sci., i, 113, and figured it on pl. iii, f. 3. The specimen was defective, and later, in deference to Dr. Speyer's suggestion, the species was referred to *Aporophyla* Gn. (Bull. Buff. Soc. Nat. Sci., ii, 309). This species does not seem to be in the British Museum, so I could make no direct comparisons.

Of *Aporophyla*, Lederer says (Noct. Eur., 96) that the species have the protuberant bulging front and lashed eyes of *Episema*, but not the plump, bombyciform habitus of that genus; on the contrary, the appearance is hadeniform, as is the maculation and the stout, well developed tongue. Thorax broad, convex, untufted, with smooth vestiture; abdomen without obvious tufts; legs unarmed; antennæ of male either serrated or pectinated.

The type of *A. yosemitæ* is in the Edwards' collection, but I never compared it with the generic characters above given.

Hadena relecina Morr. was described in the Proc. Bost. Soc. Nat. Hist., xvii, 216 1874, and in 1882, Mr. Grote in his list of that year referred the species to *Luceria*. In 1890, in Proc. U. S. Nat. Mus., xii, 440, I identified the species from one female example that agreed very nicely with Mr. Morrison's description, which I quoted. There were some slight discrepancies in what seemed to be immaterial characters and I placed the species in the series *Xylophasia*. Other specimens came to hand which I named *relecina* without further question, until a considerable series seemed to indicate a closer relation to *Aporophyla yosemitæ* than was suspected, and a departure from the original description. Recently, I saw Mr. Morrison's type in the Museum of Comparative Zoology at Cambridge, and find that Mr. Grote was right in referring the species as an ally of *burgessi*, and that through a failure to realize the meaning of Mr. Morrison's term "gray," I had totally misidentified his species. The description of the maculation stands very prettily, and the form of the ordinary spots is almost identical, as are the strongly dentate median lines; but in color and wing-form my *relecina* is totally different from Mr. Morrison's.

This induced a renewed study of my series of specimens, and I find that I have three males and two females that agree with both Mr. Grote's type and with his description; but they agree also with Mr. Grote's characterization of *Fishia*, except that the tongue is not weak. The species is certainly not an *Aporophyla* as Lederer describes it, and would be accepted as *Hadena* on superficial characters without any question. It is really a very close ally of *Anytus* Grt., from which it differs mainly in the more trigonate and more pointed primaries, in the less depressed form and in the finer, somewhat more compact vestiture. As the type of maculation is very different and the habitus distinctive, *Fishia* must stand as an Agrotid genus with middle and hind tibiæ spinose; the hind tibiæ sparsely armed and chiefly between the usual spurs. The thoracic crest is distinct and is divided anteriorly and posteriorly.

Enthea is the type and is described as coal black, with the markings velvety black. This form is not represented in the series before me.

Yosemitæ is dark ashen gray, very even in color, with the lines black and well defined. The secondaries are gray, powdery, whitish at base in the male, darker throughout in the female. The

characteristic maculation on the primaries is : a slender, somewhat curved black basal streak ; strongly dentate, single median lines, approaching each other in the submedian interspace and connected by a large claviform, the tip of which actually touches the t. p. line ; a series of interspaceal black dashes in which the s. t. line is marked by white dots or scales ; a long, narrow, obliquely decumbent orbicular ; and a large, outwardly defined reniform. My specimens are from Calgary and from British Columbia. The former are from Mr. Dod, dated September 20th and October 11th ; the latter are : 1 from Roundthwaite, the other of Capt. Geddes collecting without definite locality.

Exhilarata is a bright whitish gray species in the male, the maculation of the primaries clearly written, the secondaries purely white. In the female the ground is more fuscous, powdery, the maculation all obscured and smoky rather than black. The secondaries are smoky fuscous throughout. The marked difference between the sexes and the pure white secondaries in the male will distinguish this species from *yosemitæ*. My series consists of three males and four females : Glenwood Springs, Colorado, late September and early October (Dr. Barnes) ; Pullman, Washington, October 10th to 15th (Prof. Piper).

The new species is characterized as follows :

Fishia exhilarata n. sp.—*Male*.—Pale ashen gray, powdery. Head darker, with a blackish frontal line. Collar with a narrow black line across the middle. Patagia with black submarginal lines. Basal line not obvious. A black basal streak running into the deep outward sinus of the t. a. line. T. a. line single, black, slender, broken, strongly dentate, the tooth in the cell touching the margin of the orbicular, that in the submedian interspace reaching nearly half-way to the inner angle. T. p. line black, single, slender, dentate, more or less broken, most conspicuous in the submedian interspace where it curves inwardly, is preceded by a black shade and followed by a white one. S. t. line white, punctiform, irregular, marked by linear or sagittate preceding and following black shades, forming a diagonal series from the black shade in the submedian interspace to below the apex. Claviform broad, extending across the median space, black margined. Orbicular oblique, oval, a little more whitish than ground. Reniform concolorous, moderate in size, more or less completely outlined in black.

Female.—Maculation as in the male, but everything more obscured, less defined, and the entire ground powdery and fuscous tinged.

Expands 1.40-1.60 inches = 35-40 mm.

Hab.—As stated above.

Pachnobia roosta n. sp.—Ground color rusty red-brown. Head and thorax immaculate; with thin, divergent, hairy vestiture. Primaries whitish powdered over the costal region to the t. p. line, the ordinary markings well written. Basal line single, brown, clearly marked across the whitish costal region. T. a. line brown, preceded by a white shading, outcurved in the interspaces, with strong inward dents on the veins. T. p. line blackish brown, followed by white scales, feebly crenulate, only a little outcurved over cell, somewhat incurved below. S. t. line marked by an irregular s. t. shading against the uniformly paler terminal space. A broken, black terminal line. From the base below median vein runs a narrow yellowish streak broken at the t. a. line, and continued beyond it as a filling to the small, pointed claviform which is diffusely brown bordered. The cell between and before the ordinary spots is deep velvety brown. Orbicular small, irregular, quadrate, white filled, open to the costa, outlined by the deep brown shade elsewhere around it. Reniform narrow, oblong, irregular, a little constricted, oblique, marked by white scales about a central yellow shade, outlined by dark brown scales. Secondaries smoky over a chrome-yellow base, powdery. Beneath smoky powdered over a yellowish base, the costa tinged with carmine. Both wings with a diffuse, smoky outer band and a somewhat lunate discal spot. Expands 1.68 inches = 42 mm.

Hab.—Nushagak, Alaska, August 28, '01, McKay, collector.

One male, in fair condition, from the U. S. National Museum. The antennæ are serrated and bristled, and the species thus belongs with *carnea*, from which it differs in the lack of all gray shadings, in the completely defined median lines, in the white marked differently shaped ordinary spots and in the wing form.

Carneades rumatana n. sp.—Head and thorax luteous gray; head paler in front and with a dark interantennal line; collar with a median and terminal black line, between which a broader brown band crosses the ground; patagia with a black submargin and a white line just behind the collar, Primaries smoky luteous; costal and subcostal veins, but not the costa itself, white to the end of the cell; median vein white; a bright yellow bar from the claviform to the t. p. line; s. t. line indented on veins 3 and 4 only; apex pale. Basal line marked as an inwardly oblique black bordered yellow line in the submedian interspace only. T. a. line geminate, marked by black dots on the costa, obsolete over the costal area, yellowish, with black margins below the median vein; only a little outcurved in the submedian interspace; with a longer outcurve below vein 1. The latter is black, with a narrow yellowish border on each side. T. p. line marked by geminate black spots on the costa, white and abruptly bent over the upper angle of cell, thence a somewhat irregularly lunulate broken black line, a little sinuate, but on the whole, nearly parallel with the outer margin. S. t. line yellow, very distinct, except where it is cut by the pale apical area; very even except on veins 3 and 4, on which it is moderately indented. A lunate black terminal line. A distinct yellow line at the base of the fuscous fringes. The terminal space is evenly dark except at apex. The s. t. space is paler at the t. p. line, but darkens toward the s. t. line except on veins 3, 4, 6 and 7 which are black lined in a whitish shading. The median space is a little darker in the

cell. Claviform black margined, concolorous. extends about half-way across the median space, a bright yellow bar completing the distance. Orbicular small, oval, oblique, narrowly defined by black scales and a white annulus; centre luteous. Reniform upright, oblong or a little lunate, narrow, black edged, white ringed. centre luteous with narrow smoky lines. Secondaries whitish, the veins smoky, a smoky extramedian line, beyond which the wing is more or less smoky, a smoky discal lunule; fringes white. Beneath, primaries smoky gray, except at the margins which are paler. Secondaries a little paler than above, but similar in maculation; fringes white. Expands 1.04-1.28 inches = 26-32 mm.

Hab.—Volga, South Dakota (Truman); Calgary, Alberta, Aug. 23rd (Dod).

Sixteen males and one female, nearly all in very good condition. The species belongs obviously to the *quadridentata* series, but is quite distinct from all the species by the dark margined secondaries, which give it a marked resemblance to some species of *Oncocnemis*. The single example from Mr. Dod, numbered 10, has been in my collection for a long time without a definite place; with the South Dakota material at hand it finds a natural home. It is likely that Mr. Truman had this form mixed with *niveilinea* in which the secondaries are entirely white. The specimens sent me were included in a miscellaneous lot of unspread supposed duplicates and have been but recently brought to light.

Agrotiphila montana Morr., Ann. Lyc. Nat. Hist. N. Y., xi, 95, 1875.

This name was referred by me as a synonym of *A. staudingeri* Moeschl., after comparing Moeschler's typical specimen with the Morrison specimen marked type in the Tepper collection. I have still a photograph made from Moeschler's type; but have not succeeded in securing specimens. In looking through the collection of the Museum of Comparative Zoology recently I found another specimen of *Agrotis montana* Morr., marked "type," which I recognized as belonging to the species described as *rigida* by me. Comparing this example with Mr. Morrison's description, it is evident that it was the one actually used in delineating the characters because it was the better of the two before him. To the courtesy of Prof. Rufus H. Pettit of the Michigan Agricultural College, I owe a sketch of the Tepper type which confirmed my previous conclusions and proved that Mr. Morrison had two distinct species before him when he wrote, but drew his description from one of the examples only. The Cambridge specimen is therefore the real type of Mr. Morrison's name which must be restored to the list, and my *rigida*, Trans. Am. Ent. Soc., xviii, 133, must fall in as a synonym.

A case of this kind is perhaps the most potent argument for having only a single example as an actual "type."

Incidentally, the species standing as *Agrotiphila velata* Streck. in Dr. Dyar's list is wrongly placed. Dr. Strecker described the species as an *Agrophila*, and the name should have been listed under *Spragueia* on p. 215.

MANRUTA n. gen.

Head retracted; front flat; palpi small, thinly clothed with hairy vestiture; eyes small, round; tongue wanting; antennæ of the ♂ lengthily bipectinated, the branches setose; vestiture fine hairy, divergent. Thorax stout, clothed with very dense long woolly vestiture forming no tuftings; legs stout, all the tibiæ spinose; anterior abbreviated, broad, obliquely terminated, inner angle with a long, stout, curved claw, outer angle with a slighter, shorter claw, outer edge with two claws as long and as stout as the one at the angle. Abdomen untufted. Primaries rather short and broad; secondaries rather large, proportionately; venation normal; vein 5 of the secondaries weak and well removed from 4 on the cross-vein.

The characteristic features of this genus are its Bombycoid appearance, emphasized by the woolly vestiture, retracted head, lengthily bipectinated antennæ and lost tongue, combined with the spinose tibiæ and very characteristic armature of the anterior pair.

Manruta elingua n. sp.—Head and thorax white, with a pinkish tinge, which becomes marked on the thoracic disc. Primaries with a pinkish flush over a very pale yellowish base, and mottled with a powdering of black scales. The basal line is geminate, blackish, punctiform. T. a. line single, irregular, diffuse, blackish, broken, with a long outward loop in the submedian interspace which replaces the claviform. T. p. line single, blackish, diffuse, oblique over the costal region, lost over the cell, lunulate below the median vein. S. t. line a series of dusky points in the pale area. S. t. and terminal spaces more or less black powdered. There is a series of vague terminal dots. The fringes are pinkish, cut with white. Orbicular round, white, obscurely outlined by scattered black scales. Reniform not defined; a sort of pinkish, upright constricted line in a whitish cloud. Secondaries whitish at base, becoming smoky at the base of the white fringes. Beneath, primaries faintly yellowish; secondaries white; breast white, woolly; tarsi brown, ringed with whitish. Expands 1.20 inches = 30 mm.

Hab.—Phoenix, Arizona, November 10th and 19th.

Two male specimens collected by the late Dr. Griffiths. Both examples have been papered and are somewhat flattened; one is a

little torn in addition ; but the other is in very fair condition. The generic characters will identify the species which may be associated with a small group of heavily built moths surrounding *Thyreion* and *Fala*.

LYTHRODES n. gen.

Head closely applied to the thorax, yet not retracted ; front protuberant, the centre depressed, crateriform, this depression medially divided by an acute vertical plate which extends beyond the crater nearly half its diameter ; palpi very small, not extending beyond the rim of the shield which forms the lower margin of the head ; tongue moderate only and perhaps not functional ; eyes moderate in size, hemispherical but not prominent ; antennæ simple ; vestiture thin, hairy, divergent. Thorax rather small, clothed with thin, hairy vestiture, which forms no tufts ; collar and patagia not relieved ; legs rather stout, tibiæ unarmed, except for the usual spurs, the tarsi somewhat shortened, with unusually large terminal claws. Abdomen smoothly scaled, untufted. The wings are rather large in proportion to the body ; primaries trigonate, costal margin slightly curved, outer margin even, regularly arquate, inner margin sinuate ; venation normal ; secondaries with vein 5 only a little weaker than the others, from the cross-vein near to its middle.

The characteristic features of the genus are its peculiar frontal structure, the short stout tarsi, otherwise unarmed legs and the sinuate inner margin of the primaries. It may be associated with *Chamaeclea* Grt.

Lythroides radiatus n. sp.—Head and thorax white, with a faint yellowish tinge ; abdomen white. Primaries creamy white, with bright almost carmine red streaks as follows : two short apical streaks ; two occupying the interspaces between veins 4-5 and 5-6, respectively, for their whole length ; one filling the interspace between veins 2 and 4 ; one extending from base beneath vein 2 to the outer margin ; two short basal streaks above and below vein 1. Fringes whitish, cut with black opposite the interspaces. No median lines and no ordinary spots. Secondaries white, with a faint yellowish tinge. Beneath whitish, primaries with the disc a little darker, the markings of the upper side faintly reproduced. Expands .80-.88 of an inch = 20-22 mm.

Hab.—Yuma County, Arizona.

This pretty little species is one of those collected by Mr. Hutson in the Colorado desert, and is represented by two females in good condition. It is altogether unlike any of our other described species, and its only close allies are the species next to be described.

Lythrodus venatus n. sp.—Head and thorax pale, almost creamy yellow; abdomen nearly white. Primaries pale yellowish along the costa and inner margin, else carmineous, with all the veins relieved in pale yellow, the light color expanding somewhat toward the outer margin. Fringes white, cut with blackish opposite the interspaces. There is a whitish, indelined spot in the cell representing the orbicular; but none other of the ordinary markings are present. Secondaries white, with a faint yellowish tinge. Beneath, primaries with disk smoky reddish, the margins yellowish; maculation of the upper side faintly reproduced. Secondaries as above. Expands 1.11 inches = 28 mm.

Hab.—Santa Fé, New Mexico, in July, at light.

One female in rather poor condition from Prof. T. D. A. Cockerell, numbered 3783, and there is a similar specimen from the same source in the collection of the U. S. National Museum. The species is much larger than *radiatus*, and, whereas in the latter, the main color is yellowish and the streaks are red, in *venatus* red is the dominant tint from which the yellow veins stand out in some relief.

Lythrodus discistriga n. sp.—Head and thorax whitish; head with transverse rusty brown frontal and vertexal lines; thorax with a central and two lateral longitudinal rusty brown lines extending from base of collar to base of disc; patagia brown mottled. Primaries whitish, all the veins lined with rusty brown and an additional line through the submedian interspace. In the basal area there is a yellowish shading, and the veins are more heavily marked. At the end of the submedian its branches are shaded with brown in the interspaces, and at the apex the veins are also more heavily marked. Secondaries ocher-yellow, glistening. Beneath, primaries brown on the disc, paler outwardly with the veins relieved; secondaries about as above.

Expands .8-1.00 inch = 20-25 mm.

Hab.—Walter's Station, California, in April; Southern Arizona, April 1-15.

Two male examples; the California example, taken by Mr. Hutson, is nearly perfect and is the smaller; the Arizona specimen is from Mr. Poling and is somewhat defective. Both are from what is practically the same desert area; but the difference in size between examples of the same sex is unusual and a little puzzling. The abdomen is of the same yellow shade as the secondaries, and this, with the maculate thorax and rusty instead of red streaking will easily separate the species from the preceding.

Pseudotamila carminatra n. sp.—Head black, the protuberant front clothed with dense whitish hair. Thorax blackish, with carmine scales and whitish hair intermixed, the collar darker inferiorly, else forming no distinctive maculation. Primaries with a carmine shading over a dull, smoky though pale luteous. The scales are a little metallic or coppery, and the tint changes some-

what according to the angle of vision. The darkest part of the wing is at the base, extending along the costal region to the apex, and then along the fringes to the hind angle; the lightest part is in the cell on each side of the reniform. Basal line smoky, diffuse, from the basal third of costa, a little curved inwardly to reach the inner margin well within its basal third. T. p. line smoky, diffuse, followed by a paler shading, evenly outcurved over the cell and a little incurved below. No. s. t. line. Fringes blackish at base, tipped with white. Orbicular wanting. Reniform large, oval, undefined, smoky. Secondaries black, with whitish fringes. Beneath, primaries with upper half of basal space, a large discal spot, an extra median band and all of terminal space black, else white; secondaries black, with white fringes and sometimes with a narrow white submarginal line; the body parts are clothed with whitish. Expands .60 of an inch = 15 mm.

Hab.—Colorado, 6000 feet.

Two males and two females in good condition. The specimens came to me several years ago from Mr. David Bruce, but were, I think, collected by Mr. Mason. I have neither date nor accurate locality. The species is smaller than its congeners, and easily distinguished by the black secondaries and carmine shaded primaries.

Melicleptria kasloa n. sp.—Head, thorax and abdomen black, with a clothing of thin yellowish or greenish hair that permits the ground color to appear. On the abdomen the vestiture forms fringes at the edges of the segments, giving a ringed appearance. Beneath, on body and legs the vestiture is much more dense, longer, and the whole appears whitish or very pale yellow. Primaries with the basal, s. t., and most of the terminal space olivaceous, with an admixture of black scales. The median space is whitish or pale yellow, with dusky clouds on the costa and inner margin. The median lines are marked only by the contrast between the median space and those on each side of it. T. a. line from costa across the cell about one-fourth from base, then outwardly bent almost to the middle of the wing and incurved to reach the inner margin at about its basal third. T. p. line very evenly and moderately bisinuate. S. t. line yellowish or whitish, sharply limited in the dark s. t. space, somewhat diffuse outwardly; in course it is irregular, and sends in a long dent opposite the cell, constricting and nearly dividing the s. t. space; below that rather evenly bisinuate. Fringes dark, cut with yellowish opposite the interspace. Ordinary spots large, solid, of the dark ground. Orbicular round; reniform broadly kidney shaped. Secondaries black, with a whitish disc, which is very much narrowed by the large black discal spot; there is also a very small yellowish band near the middle of the outer margin. Fringes whitish. Beneath whitish, the lower half of basal, and all of the s. t. space and the large ordinary spots black; secondaries with inner margin, a large discal spot and an abbreviated outer band, black. Expands .96-1.00 inch = 24-25 mm.

Hab.—Kaslo, British Columbia, June 7th and 26th.

Three females, in good condition, from Mr. J. W. Cockle. One of the examples is bred and this is somewhat lighter in color,

appearing as if there was a thin film of whitish over the insect, which disappears after even a brief flight. The species is quite a well marked one and seems to conflict with none other of the genus.

Notes on *ACONTIA* Ochs.

To the courtesy of Dr. William Barnes I owe a series of specimens from his collection, including also some that were collected by or for Mr. O. C. Poling. This material has enabled me to decide as to the standing of some forms that had been doubtfully set aside, and it added some forms undoubtedly different from anything that I had previously had under observation. The increase in the number of species has been quite unexpected, and indications point to a yet greater number. All the separations made have justified themselves, and the range of variation, though considerable in certain directions, seems to move within tolerably well defined lines.

The exact standing of the species cited by me under *elegantula* Harv. is yet open to question. Of *arizona* and *seminivealis* I have compared the types and their identity is unquestionable. I am not so sure now that *elegantula* is really the same species. A considerable series of the *arizonæ* form is now at hand and shows so much variation that I have been tempted to believe that there was more than one species; but none of this variation runs toward *elegantula* which is clearly separable, though nearly allied in type of maculation. *Elegantula* comes from Nevada, and I have no material from that region for comparison. Under the circumstances *arizonæ* must be restored to rank as a species. As to *semiopaca*, Mr. Grote has himself made this a synonym of *elegantula*. I have no material from the type locality of this species (Montana), therefore cannot speak as to the correctness of the reference; it is a probable one, however, as the faunal region is the same.

Tornacontia altera n. sp.—Head, thorax and abdomen white, immaculate. Primaries white to the middle, save for a gray shading at base; olivaceous gray or brown outwardly. The basal gray shade extends over the costal region, broken by the white basal line to the t. a. line, which is white and defined by the gray shading which extends across the wing over its course. The shadings are not at all prominent and much lighter than the outer parts of the wing. The outer limit to the pale space is formed by the median shade which is olivaceous gray on the costa, a little oblique to the cell in which it is cut by a pale ray that extends to the reniform; below the cell it is defined by a rich brown shade which forms a band of moderate width and fades into a bluish gray. The t. p. line is

incepted by a gray costal spot, followed by a white patch which extends obliquely in to the reniform; over the cell the line is barely traceable, and below that it is lost. S. t. line white, irregular, tending to become broken. Terminal space cut with white on the veins and tending to become white powdered. A broken terminal line of black scales. Fringes long, white, with an olivaceous line at base, and olivaceous spots at apex, above the middle of the margin and at the hind angle. The orbicular is a minute black point. The reniform is round or nearly so, olivaceous gray, partly edged by black scales, white ringed. Secondaries white, becoming smoky at the outer margin; fringes white. Beneath, primaries smoky, the costal and outer margins white; secondaries white, immaculate. Expands .92 inches = 23 mm.

Hab.—Southern Arizona (Poling); Hot Springs, New Mexico, 7000 ft. alt. (Hulst).

One male and one female, both in fair condition. The frontal process in this species is shorter and more obtuse than in the other described species, but is obvious and justifies the reference to this genus, in which it is thus far unique in having the head and thorax white. Superficially it resembles *candefacta* at first sight, differing at once, however, by the white secondaries.

Tornacontia tripartita n. sp.—Head deep sable brown. Thorax white, collar brown tipped; the vestiture of the disc is defective in the specimen before me, but apparently the patagia are edged with brown. Primaries white, with a vague bluish tint, the markings bluish gray. The upper half of the wings is chiefly white; the lower half is mostly gray; the space between the median and t. p. line below the cell forming the darkest portion of the wing. All the usual lines obvious. Basal line forming a brown spot on the median vein. T. a. line leaden gray, diffuse, and incomplete over the cell, deeply incurved, black, preceded by a white line from the median vein to the inner margin. The median shade line is marked by a gray costal spot, is lost through the cell, black, parallel to the t. p. line from the median vein to the inner margin. S. t. line marked by a gray s. t. shade which contrasts with the white terminal space; in course only a little irregular. A black, lunate terminal line, narrowly cut on the veins. Orbicular a small round dot. Reniform small, a little irregular, gray, the sides edged with black. Secondaries dull white, with a faint smoky yellowish tint. Beneath, primaries blackish, the margins yellowish, the reniform black; secondaries as above. Expands 1.00 inch = 25 mm.

Hab.—Wilgus, Cochise Co., Arizona.

One female in fair condition, from Dr. Barnes' collection. The species is allied to *megocula*, but is more white, with all the usual markings present, and the reniform small, irregular. The chisel-like projection on the front is broad and well marked. On the secondaries the venation is as in its allies.

Conacontia orba n. sp.—Head and thorax creamy white; vertex and disc a little smoky. Abdomen yellow. Primaries creamy white along the costa

and somewhat less than half the upper portion, interrupted by a narrow band at t. a. line, a broad band at t. p. line over reniform, and by an irregular large blotch before the s. t. line; apex also dusky. The lower half or more is smoky gray to the s. t. line, leaving the hind angle white. Most of the s. t. space is white, except on the costa. The terminal space is mottled with golden brown, and there is a broken black terminal line. The fringes are smoky, twice cut with creamy on the outer margin and creamy at the hind angle. A somewhat obscure band of golden brown scales begins at the dark s. t. spot on costa, curves inward to include the reniform and then downward to the inner margin at its middle. T. a. line marked as a gray band over the pale upper half of the wing. T. p. line marked by a broad costal band and then lost until it re-appears as a broken blackish outer edging to the golden brown band. S. t. line marked as a narrow white line between the dark apex and s. t. patch on costa, then lost in the creamy s. t. space. The orbicular is a distinct round gray spot of moderate size just separated from the dusky lower portion of the wing. The reniform is a larger round spot incompletely white ringed and not completely separated from the dusky costal patch just above it, or from the dark inferior portion of the wing. Secondaries an even, pale, glistening smoky yellow. Beneath, primaries yellow, the disc smoky and with a discal spot; secondaries very pale yellow, with darker outer border. Expands .84-1.04 inches = 21-26 mm.

Hab.—Huachuca Mountains, Arizona.

Three females in fair condition, from Dr. Barnes. The species is allied to *angustipennis* in general appearance and type of maculation, but differs obviously in the pale thorax and the distinct orbicular. There are other marked differences, but these are the most apparent and render the new form recognizable at a glance.

Conacontia huachuca n. sp.—Head and collar creamy white, disc of thorax leaden gray; head with an admixture of gray scales on the vertex and on the front. Primaries creamy white along the costal region nearly to the s. t. line and embracing all above the median vein. Along the inner margin, starting not quite at base, and extending to the s. t. line, is a deep gray shading, very jagged at its upper margin, nearly or altogether cut by an obtuse extension of the white shade at its middle; indented or quite crossed by a narrow pale thread at the place of the t. a. line, and by another, even more irregular beyond the t. p. line. There is an apical gray patch, through which the s. t. line is obvious, and a series of three patches along the outer margin, which also extend over the fringes. The median lines are traceable through the pale region of the wing as lemon-yellow lines. Orbicular wanting. Reniform a small yellow dot encircled by the vaguest kind of a yellow annulus. There is a series of black terminal lunules, or a broken black terminal line. Secondaries white, with a faint yellowish tinge. Beneath, primaries distinctly yellowish, with maculation of upper side feebly reproduced; secondaries white. Expands 1.08-1.12 inches = 27-28 mm.

Hab.—Huachuca Mts., Arizona (Dr. Barnes).

Five specimens, all males. Allied to *flavicosta* and with the same

general type of maculation; but the secondaries are nearly white instead of smoky; the primaries are whiter, and have the dark area along the inner margin broken and irregular; the thoracic disc is leaden gray instead of brown, and, finally, the frontal process of the head is umbilicate or navel shaped, with an obvious rim surrounding the roughened protuberant centre.

Acontia alessandra n. sp.—Head and thorax white; front protuberant, with a gray transverse band. Abdomen yellowish. Primaries white from base to beyond middle, interrupted on the costa by an oblong, smoky gray patch at the normal inception point of the t. a. line. At the inception point of the t. p. line another oblong bar separates off a quadrate white spot which extends to the s. t. line. Outer portion of wing olivaceous gray, mottled with black and brown scales. In this dusky area there are traces of a dentate black t. p. line and of a very irregular and incomplete pale s. t. line; but all is broken and obscured. There is a black, interrupted terminal line and the fringes have a blackish cloud opposite the cell and at inner angle. Orbicular wanting. Reniform nearly round, blackish, absorbed in the edge of the dusky outer portion of the wing. Secondaries white, yellowish tinged along the outer margin. Beneath, pale yellowish, with the maculation of upper surface faintly reproduced on the primaries. Expands .76-.88 inches = 19-22 mm.

Hab.—Stockton, Utah, in October (Franck); Huachuca Mts., Arizona (Barnes); Shovel Mt., April and July, Kerrville, and Black Jack Springs, Texas (Coll. div.).

Six specimens representing both sexes in good or fair condition. The species belongs to that series in which a quadrate white spot is separated on the costal region before the apex. It is allied to *quadriplaga*, but is white at the base and to or beyond the middle. There appears to be no obvious difference between the sexes and there is no species with which it is liable to be confused.

Acontia disconnecta n. sp.—Head and thorax gray; collar more or less broadly white; disc with metallic scales. Primaries white above the median vein and along costa to the s. t. line. A dark, brown gray shading from base below median vein to the t. p. line, deeply indented or entirely cut by a white tooth from the middle of the median space. The apex is brown, and from this an oblique shading of olivaceous, gray and metallic scales extends toward the dark area along the inner margin without, in any case before me, quite bridging the gap. The area about the hind angle white. There is a broken black terminal line, and the fringes are largely leaden gray. S. t. line very incomplete, white, variably marked by dusky shadings from the costa to the middle of the wing, thence lost. Orbicular wanting. Reniform vaguely marked in one specimen only. Secondaries white, with a faint yellowish tinge, and with a narrow smoky outer edging. Beneath, primaries yellowish, the maculation of the upper surface faintly reproduced; secondaries white or nearly so. Expands .94-1.04 inches = 24-26 mm.

Hab.—Huachuca Mts., Arizona (Dr. Barnes).

Four males in good condition. This species bears an aggravating resemblance to *Conacontia huachuca*; but while the front of the head is prominent and somewhat inflated, there is no umbilication and no projecting rim. There can be no question of a sexual difference, because all the examples of both species are males. Within the genus to which I have referred it, the nearly ally is *major*, which is much larger and has decidedly yellowish secondaries.

Acontia huita n. sp.—Head and thorax white; head with a protuberant front; sometimes almost tuberculate. Primaries white to the middle, and the white continues along the costal region to the s. t. line, broken only by a yellowish or gray costal spot at almost the middle of the costal margin. A leaden gray area begins at the middle of the inner margin, reaches nearly to the inner angle and narrows a little toward the median vein on which it is obtusely rounded, leaving the round, leaden gray reniform free. A yellow shade extends into the cell before the reniform, and may or may not connect with the gray patch on the costa. The terminal space is dusky, gray or yellowish from the apex to the middle of the outer margin, and in some specimens it continues almost to the hind angle and invades the s. t. space, indicating an irregular, broken s. t. line. There is a white terminal line before a series of black interspaceal marks. The fringes are gray at base, tipped with white. Orbicular wanting. Reniform round, leaden gray, white ringed or entirely surrounded by white. Secondaries blackish tinged, paler basally, the fringes white. Beneath, primaries blackish, with a yellow tinge along the costa, secondaries white. Expands .60-.80 inches = 15-20 mm.

Hab.—Kerrville, Texas, Huachuca Mts., Arizona, in April (Dr. Barnes); Southern Arizona (Mr. Poling).

Three males and five females, all in good condition. The species is similar to *binocula* in general appearance, but is smaller throughout. The secondaries have a blackish tinge and the terminal area is more evenly gray. In *binocula* there is a continuous band from the broad gray area which rests on the inner margin to the apex, which partly envelopes the reniform, but leaves the terminal area free. In *huita* this large gray area is not continuous and is completed below the reniform. The gray shading extends from the apex along the outer margin, and if the two shadings are at all connected it is by yellowish shadings. There is also a resemblance to *candefacta*, especially as the dusky secondaries of that species offer a similarity; but here the absence of all gray markings in the basal area, joined to the separation of the gray shadings, affords a distinctive character.

Euclidia dyari n. sp.

This is a new name to designate the species which Dr. Dyar mistook for *intercalaris* Grt., when, in 1898, he determined that there were two allied species. Mr. Grote's description is peculiarly indefinite and applies with almost equal force to two forms with practically the same pattern of maculation. I had never seen the two together and may have put the same name on both at different times.

Apparently Dr. Dyar accepted the specimen labelled *intercalaris* in the U. S. National Museum as the true species, and described as *diagonalis* the form differing from it. Prof. F. H. Snow recently sent me, among other material for determination, a specimen of the supposed *intercalaris*, and, as he collected the material for the original species, I returned the example unnamed, with the request that he compare it with his type material. This he did, and was good enough to send me one of the two typical specimens from the Museum of the University of Kansas. This proves to be *diagonalis* Dyar, which is therefore a synonym of *intercalaris* Grt., and leaves an unnamed form. *Dyari* is that form of *Euclidia* in which a broad pale band curves upward from the hind angle to connect with the equally pale reniform. *Intercalaris* is that form in which the bar from the hind angle is oblique and reaches the median vein well beyond the reniform. The synonymy stands:

E. intercalaris Grt.

diagonalis Dyar.

E. dyari Sm.

intercalaris ‡ Dyar.

Isogona reniformis n. sp.—Ground color a very pale gray, with a yellowish admixture, tending to ashen. Head and collar rusty yellow-brown. Thoracic disc like primaries. Primaries with all the veins pale through the dark markings of the wing; reniform and most of the s. t. space contrasting deep bronze-brown. Basal line indicated by scattered blackish scales. T. a. line single, deep brown, broken, marked by a triangular spot on costa, variably evident below that. T. p. line, single, brown, linear, broadly broken on each vein, rather squarely exerted over the cell and a little incurved below. S. t. line of the ground color, narrow, well marked, irregularly sinuate, dislocated on veins 5 and 6, emphasized by a preceding dark shade and a much narrower following one. A series of black terminal lunules, and a yellow line at base of fringes. Orbicular a deep brown round dot or spot of variable size, and it may be altogether wanting. Reniform large, brown, with a little curve, narrowly bordered with pale scales. Secondaries ranging from yellowish to smoky, the outer margin a little darker, a discal lunule obvious in some specimens. Beneath, very pale yellowish; primaries with a discal cloud. Expands .80-.92 inches = 20-23 mm.

Hab.—Hackley, Texas, in April.

Three male and two female examples in poor condition, through Mr. George Franck. As compared with *natatrix* (*tenuis*) this is much smaller, with shorter, more trigonate primaries, in which the outer margin is not obviously angulated. The palpi are also shorter and the markings are quite characteristic. The species seems to be locally common, and specimens are in several collections as *tenuis*—through my fault.

Yrias albiciliatus n. sp.—Head and thorax pale pink; like a pink flush over a white base. Primaries ranging from pink at base to brick-red in the terminal space; outer half of basal space and all of the s. t. space leaden gray; altogether a very pretty species, with well defined contrasts and markings. Basal line geminate, gray, included space brick red, forming the inner limit of the gray fascia that extends to the t. a. line. The latter is geminate, inner defining line blackish, outer line narrow and brown, included space brick red; as a whole outwardly oblique and only a little irregular. T. p. line geminate, inner line very narrow, gray, outer line darker, merging into the dark s. t. space, included shade brick red; as a whole the line is squarely exserted over the cell and nearly straight from below the reniform to the inner margin. S. t. line irregularly and deeply sinuate, at two points almost touching the outer margin, defined by the difference in color between the leaden gray s. t. and brick red terminal spaces. On each side of this leaden gray band there are white dots on the veins. There is a festooned terminal line, beyond which, on the incurves, are red lunules, and on the outcurves blackish gray spots at the base of the very long whitish fringes. A quadrate gray blotch at the middle of the costa indicates the beginning of a median shade which is marked only by a few gray scales to vein 1, below which it is distinct to the margin. The orbicular is wanting in the specimen. Reniform indicated by a few gray scales forming a very fragmentary outline. The pale pink of the median space becomes brick red in the square exsertion of the t. p. line. Secondaries whitish at base, leaden gray beyond the middle, the inner margin of the dark area irregular. Fringes long and white. Beneath, wings white at base, with a broad blackish outer band; fringes white. Expands .84 of an inch = 21 mm.

Hab.—Yuma County, Arizona (Hutson).

A beautiful little species, represented by one very good female specimen. The species is not really an *Yrias*, but it resembles that genus in general form, and may remain here until further material makes a better reference possible.

Yrias strigalis n. sp.—Ground color a smoky yellowish brown, with an admixture of metallic bluish gray scales. Head darker, seal-brown. Collar intermediate in color between the head and thorax, which is of the same color as the primaries. Wings transversely strigate by alternate rows of smoky and gray scales over which the maculation is obscurely written in smoky brown. Primaries without contrasts; a blackish apical spot, outwardly defined by a yellow

line, is the most conspicuous feature. Basal line geminate, irregular, as a whole upright or even a little oblique inwardly; the included shade yellowish, outer defining line most obvious, diffuse. T. p. line geminate, inner line lunulate, included space yellowish; a diffuse shading over the entire line breaks up this included space into yellowish lunules; in course the line is evenly outcurved over the cell and a little incurved below it. Median line geminate, smoky, included space paler, curved over the reniform and as a whole intermediate in course between the ordinary lines. S. t. line yellowish, incurved in the interspaces, outwardly toothed on the veins, preceded by a smoky shade line. Outer margin indented on the veins, rounded over the interspaces. A smoky terminal line follows the margin, and running in a little on the veins meets the teeth from the s. t. line, the terminal space being thus divided into a series of smoky circles. The tendency is to a somewhat darker, more bluish tinge in the s. t. space; but this is not a prominent or even a constant feature. Orbicular a smoky, round spot of moderate size in a yellowish areole. Reniform a large, irregular, indefinite smoky blotch, followed by a yellowish shading. Secondaries with the maculation bands and lines of the primaries continued across them, but somewhat less obviously. The terminal space is broader and the division is into ovals rather than circles. There is no discal spot. The fringes are long, follow the outer margin and are narrowly cut with pale opposite the veins. Beneath, yellowish to dark smoky, primaries with a smoky extra median line followed by a dark shade. Secondaries with a dusky median band and an irregular s. t. shade, diffuse inwardly, outwardly more or less defined by a yellowish shading. Expands 1.08-1.16 inches = 27-29 mm.

Hab.—Arizona.

One male and two females from the Graef, Hulst and Neumoegen collections, respectively. The species resembles *clientis* in size and in the apical blackish spot. It is narrower winged, however, with less produced apices of primaries, and is much paler, more powdery, with more diffuse maculation. The marking of the terminal space is characteristic in the new species, though indications of it may be made out in *clientis*.

Bomolocha atomaria n. sp.—Head and thorax dusty gray-brown, immaculate. Primaries gray, shaded and powdered with smoky brown, without contrasting maculation. From the base to the t. p. line the color is rather evenly smoky brown, except sometimes along costa where it may be gray. T. a. line a vaguely deeper brown shade, more or less obviously outbent about the middle. T. p. line a narrow brown band, almost even in course, without teeth or angulations. Beyond this line is the palest part of the wing, shading gradually to the s. t. line, which consists of a series of small, blackish dots followed by pale scales; in course it is about parallel with the outer margin. Terminal space paler beyond the s. t. line, darkening to the ground before the margin, except that the apex is left pale. There is a narrow, chestnut brown terminal line, and the fringes are dark. No trace of ordinary spots. Secondaries dusty yellowish gray, the fringes darker. Beneath powdery; primaries smoky. Expands 1.12-1.20 inches = 28-30 mm.

Hab.—Volga, South Dakota.

Four male examples in good or fair condition, from the late Judge P. C. Truman. The species is most nearly allied to *deceptalis*, but is slighter and very much lighter in color. The palpi are longer than is usual in the males of this genus, and in that feature resemble *Lomanaltes*. But they are straightly projected, and the wing form is that which is normal in *Bomolocha*.

***Scolecocampa atriluna* n. sp.**—Ground color of head, thorax and primaries an even, soft, creamy clay yellow. Palpi brown at the sides, else head and thorax immaculate. Primaries with a round black spot at the base of the cell; a small, punctiform dot at the place of the orbicular, and a prominent lunate reniform at the end of the cell. A small blackish costal spot indicates the inception of the t. p. line, and a small brownish line on the inner margin suggests its end. There is a series of small terminal blackish dots at the ends of the veins. Secondaries more yellowish at base, with a broad, smoky outer margin and a moderate, smoky discal spot. Beneath, more ochre yellow, with an extra median diffuse powdery blackish band, less obvious on secondaries, and a distinct blackish discal spot. Expands 1.40 inches = 35 mm.

Hab.—Huachuca Mts., Arizona.

A single female from Dr. Barnes. The species is amply distinct from the common form by the very even coloring of the primaries, which lack all powdering, and by the very distinct sharply defined black reniform. It is quite probable that further material will show that the t. p. line may become complete.

EUCALYPTRA Morr.

1875, Morr., Ann. Lyc. Nat. Hist. N. Y., xi, 104.

Head moderate in size, closely applied to the head, but hardly retracted; front full, hardly protuberant, smooth; eyes naked, large, hemispherical, not protuberant; tongue weak, not functional, of moderate length or very short; palpi long, oblique, with long scales on the second joint, directed downward and giving it a compressed appearance, terminal joint moderate, slightly drooping; forming with a pointed frontal tuft a snout-like appearance; antennæ in the ♂ with the joints long, with long lateral bristles and small tufts of shorter hair, the anterior angles somewhat marked. The thorax is small, only a little convex; vestiture scaly, forming no tufts, collar and patagia marked but not relieved; legs of moderate length, rather stout, unarmed, save for the usual spurs. Abdomen long and stout, reaching to or exceeding the anal angle of the secondaries,

untufted. Primaries moderate or rather large, varying somewhat in width, costal and inner margin shouldered, then subparallel or gently curved, apex rectangular, hind angle obtusely rounded; venation normal, veins 7, 8 and 9 on one stalk out of the end of the accessory cell; 7 branches at less than one-quarter the distance to the margin, 8 and 9 diverge at about one half way between cell and apex. Secondaries proportionate, vein 5 as strong as the others, out of the weak cross-vein at about one third the width of the cell.

The species are very similar in appearance and type of maculation. The primaries have no transverse maculation, except a punctiform or fasciform t. p. line; there is a tendency to form a longitudinal shading through the middle, usually accompanied by the loss of the transverse marking; the ordinary spots are reduced to small dots and one or both may be entirely wanting. In color the range is from snowy white through creamy yellow to smoky brown or blackish.

Stygialis is the largest and darkest form, the color being a uniform smoky blackish on both wings, the maculation a black, diffuse streak through the centre of the primaries. The species is from Southern Arizona, and has an unusual admixture of flat hair in the thoracic vestiture, as well as a better developed tongue than the other species.

Strigata has the same longitudinal maculation, but is creamy white in color, with smoky powdering. The tongue is here decidedly weak, but is longer in the female than it is in the male.

Bipuncta is a broad winged species, almost as large as *stygialis*, and the only one in which there is a complete band at the place of the t. p. line; this band varies much in distinctness, but seems to be always present and is often well marked. In color the primaries range from creamy to smoky gray, the difference being mostly due to the variable number of smoky atoms powdered over the light base.

Obscura Grt. belongs here and differs in its somewhat larger size, much darker color and less obvious t. p. line.

Nivealis has the wing form of the preceding; but the primaries are white, immaculate, except for a gray dot on the cross vein at the end of the cell.

Humeralis is narrower winged, with the shoulder of costa and inner margin of primaries well marked. The color is creamy yellow, powdery, and tends to become brown or smoky at the outer

margin, the fringes being usually darker than the rest of the wing. The t. p. line is punctiform in this species, usually traceable, and there may be a fairly obvious longitudinal dusky shading through the middle of the wing.

Umbonata has the wing form of the preceding, but the primaries are uniformly smoky brown, and the secondaries are not much lighter. The discal dots are traceable in most specimens, and in one example there is an indicated t. p. line; but all maculation may be completely absent.

Apicalis is similar to *humeralis* at first sight; but the primaries are decidedly more pointed, the color is more even, there is no darkening outwardly and no t. p. line or longitudinal shading on any specimen.

Minorata is the smallest of the species; like *apicalis* in wing form but darker, with an exterior line almost as continuous as that in *bipuncta*, and in the type specimen a very decided indication of a t. a. line.

1. Primaries with an obvious longitudinal dark streak through the middle of the wing, and no transverse line.....2.
 Primaries with a complete band at the place of the t. p. line, and no longitudinal streak.....3.
 Primaries with t. p. line punctiform or altogether wanting; longitudinal streak absent or only indicated4.
2. Color deep smoky brown, primaries trigonate, inner margin not much shouldered**stygalis.**
 Color creamy white, powdery; primaries more parallel, inner margin distinctly shouldered**strigata.**
3. Size large (25 mm. or more), broad winged, with rectangular apices.
 Size small (less than 20 mm.), narrow winged, with pointed apices.
 **bipuncta.**
 **minorata.**
4. Primaries white, without powdering, immaculate, except for a gray discal spot**nivealis.**
 Primaries whitish, powdery, without a t. p. line; shoulder of inner margin small; apex pointed.....**apicalis.**
 Primaries yellowish, powdery; punctiform t. p. line usually obvious; shoulder of inner margin well marked; apex rectangular.....**humeralis.**
 Primaries smoky brown, practically immaculate, wing form as before.
 **umbonata.**

***Eucalyptra stygalis* n. sp.**—Ground color a very deep smoky gray or brownish. Primaries slightly lustrous, powdered with black; a diffuse, black but not contrasting longitudinal shade through the centre of the wing. The black discal dots are traceable. The fringes are a little darker than the rest of

the wing. Secondaries a little lighter in tint than the primaries, immaculate. Beneath paler, smoky gray, powdery, else entirely immaculate. Expands 1.36 inches = 34 mm.

Hab.—Southern Arizona, Poling.

One male example in good condition, received from Dr. Barnes. The chief differential characters of this species have been already mentioned. Its relationship to the others of this genus is obvious, and in wing form it most nearly resembles *bipuncta*.

Eucalyptra nivealis n. sp.—Front of the head, palpi and anterior legs rusty brown or paler. Head above, thoracic disc, base of abdomen and primaries white, slightly lustrous, and in some points of view with a slightly yellowish tinge. Primaries with a very narrow, broken brownish terminal line, which may be wanting. Discal dots very small or wanting. A faint brownish tinge along the median vein. Secondaries smoky yellowish, immaculate. Beneath, primaries smoky; secondaries yellowish, smoky along the costal margin. Expands 1.08–1.16 inches = 27–29 mm.

Hab.—Hastings, Florida (Barnes); Iowa City, Iowa, June 23 (Wickham).

Two good males very similar in appearance, despite the widely separated localities. The Iowa City example came from the Kemp collection, and is dated in 1898. The tongue is very weak and short; the wing form is essentially as in *bipuncta*, but there is a more obvious shoulder on the inner margin. The species should be easily known by the white primaries which are free from powderings.

Eucalyptra humeralis n. sp.—Ground color yellowish, varying in tint and variably black or brown speckled. Front of the head, palpi and anterior legs seal brown. Primaries tending to darken outwardly, fringes usually darker than the rest of the wing. Most of the specimens with a fairly obvious punctiform t. p. line, and in some specimens a darker shading below the median vein indicating a longitudinal shade. A series of brown or blackish terminal lunules. Discal spots black, punctiform, the orbicular tending to become the larger and more prominent. Secondaries smoky, with a yellowish tint, fringes tending to blackish. Beneath, primaries very dark smoky, often with the discal dots of the upper surface reproduced; secondaries usually paler, except along the costa. Expands .80–1.20 inches = 20–30 mm.

Hab.—North Carolina, in August; Hastings, Florida, in April, June, September and October.

Thirty males and two females are before me, most of them in good condition. The Hastings specimens come, in part, from Dr. Barnes, in part from Mr. Kearfott, and in part from Mr. Franck.

This is the most stumpy-winged species of the series; the primaries being broad and short, with a distinct shoulder on the inner

margin. It is also rather more deeply yellow in ground color than the other species, and owes the outward darkening less to a denser powdering than to a deepening of the actual tint. The tongue is very weak, and in some examples also very short; but that seems a variable quantity.

In one example the longitudinal streaking is sufficiently well marked to suggest *strigata*, but the much broader wing, the distinct t. p. line and the very dark under side serve as distinctive characters. It seems that, in this species, the stumpiest wings are best marked, and that all the markings intensify in similar proportion.

Eucalyptra umbonata n. sp.—Head, thorax and primaries a deep chocolate brown, somewhat lustrous. Primaries with a series of darker terminal lunules. In some specimens a punctiform t. p. line is indicated. Discal spots punctiform, black, usually present, and in one example the reniform is geminate. Secondaries a paler, more smoky brown, palest at base. Beneath, dull chocolate brown, powdery, immaculate. Expands 1.00–1.16 inches = 25–29 mm.

Hab.—Hastings, Florida, April (Kearfott) and June (Barnes).

This has the general wing form of *humeralis*, but is easily distinct by its uniform chocolate brown color, which is not due to a powdering or an overlay upon a lighter base. The tongue is weak and only moderate in length. I have eight examples, all of them males.

Eucalyptra apicalis n. sp.—Front of head, palpi and anterior legs brown. Head above, thorax and primaries whitish, with fine black powderings. Primaries with a punctiform terminal line and punctiform discal spots, else immaculate. Secondaries creamy white or yellowish to smoky gray, immaculate. Beneath, smoky gray or brownish, more or less powdery. Expands .80–1.00 inches = 20–25 mm.

Hab.—Hastings, Florida, June 8th to 20th (Barnes); September 21st to October 6th (Kearfott).

Six ♂ and four ♀ examples, varying only in the apparent coloration. The June specimens are as a whole more gray than those dated September and October, and they are also the larger. Otherwise there seems no difference, and in none is there any appearance of a transverse or longitudinal line or shade. The tongue is much reduced, and in some examples seems almost wanting at first sight. The character of the wing form has been already discussed.

Eucalyptra minorata n. sp.—Ground color whitish, so densely powdered with black as to seem gray. Palpi, head beneath and anterior legs brown. Primaries with a heavier powdering to form an evenly curved very obscure t. a. line over the punctiform orbicular. T. p. line continuous, single, fasciform, bent

over the cell and rigidly oblique from the angle to the hind margin. A lunuate terminal line. Discal spots black, punctiform. Secondaries smoky gray, with a darker terminal line; else immaculate. Beneath, smoky brown, powdery; secondaries with a blackish discal lunule. Expands .76 inches = 19 mm.

Hab.—Hastings, Florida, October 4th.

One male specimen in rather poor condition, from Mr. W. D. Kearfott. This is the smallest species of the genus, and it is unfortunate that there should be one example only. The traceable t. a. line of the primaries above and the dusky lunule of the secondaries below should make the species recognizable. The tongue is moderate in length but weak.

ARETYPA n. gen.

Head rather small, closely applied to the thorax, yet not retracted; eyes naked, hemispherical, somewhat protuberant; front full, smooth; palpi oblique, exceeding the head by more than its own length, basal joint moderate, rather slender, second joint transversely flattened at tip, vestiture directed forward and downward, terminal joint a little drooping; antenna of male lengthily bipectinated, the branches ciliated, each branch with a curved bristle at the inner side of the tip; tongue spiral, moderate in length and apparently functional. Thorax moderate, subglobose, vestiture composed of flattened hair forming no tufts; collar and patagia not relieved; legs long and slender, closely scaled, with the usual spurs long, but otherwise unarmed. Primaries trigonate, proportionately large, apex a little pointed; venation normal, veins 7 and 9 from the end of the accessory cell 8 out of 9 half way to the apex. On the secondaries vein 5 is weaker than the others, though fairly well developed, and is from the cross vein about one-third across the cell.

This genus differs from *Eucalyptra* in the lengthily pectinated antenna of the male, in the slender, longer legs, and in the differing form of the primaries which have the outer margin a little excavated below the apex. These points were noted in my description of the species referred here; but I thought at that time that it might remain associated with *bipuncta*; the occurrence of so many other species, all closely allied would leave *pectinicornis* as an abnormality and it is therefore separated as the type of the present genus.

Amolita obliqua n. sp.—Head and thorax creamy yellow, with a pinkish flush, immaculate. Primaries with a more or less obvious reddish flush over a pale yellowish base, an admixture of brown and blackish scales giving the wings

a vague powdery appearance. A dusky brownish shade band extends rigidly from the inner margin, about two-fifths from base, to the apex. A second, narrower and less obvious but similar band extends from the inner margin two-thirds from base and curves gently outward to the apex where it meets the rigid band. There is a series of black terminal dots and a pale line is at the base of the fringes. The orbicular is a minute black point. The reniform is indicated by a somewhat larger dot in some specimens, but may be entirely absent. Secondaries a pale glistening yellowish white, immaculate. Beneath, somewhat ochreous, powdered with darker scales; secondaries with a small discal spot. Expands .80-1.00 inch = 20-25 mm.

Hab.—Hastings, Florida, April, September 20th to October 21st.

A series of 16 males and 2 females from Mr. W. D. Kearfott are readily distinguished from *fessa* by the rigid inner shade band, which runs direct from apex to inner margin and does not curve downward along the median vein. There is in some specimens a dusky shading along the median vein or in the cell, but it is undefined and does not join the definite band. One of the two females is larger than any of the males, and it is probable that this difference in size will prove to be the rule.

***Amolita roseola* n. sp.**—Head and thorax dull white, with an admixture of reddish scales that gives a faint rosy tinge, else immaculate. Primaries yellowish white, with a sufficient admixture of red scales to give a very decided rosy tinge, through which the veins are traceable in the ground color; an admixture of darker scales gives the wing a somewhat powdery appearance. A somewhat indefinite deeper shading runs from base through the cell to the apex, and another of the same kind from base through the submedian interspace, curving toward the apex from about the middle of the wing. The orbicular is indicated by a small black dot, and the reniform by a pair of such dots. There is a powdering of blackish scales in the submedian interspace, which may form a black mark near base and a short spur near the middle of the space. The terminal spots are black and linear; really a broken terminal line. Secondaries whitish, glistening, with a vague wash of yellow and pink. Beneath, red along the costa only, fading toward the interior. Expands .60-.80 inches = 17-20 mm.

Hab.—Hastings, Florida, March and October.

Six males, from Mr. Kearfott, vary decidedly in the distinctness of the maculation on the upper side. In one example there is scarcely a trace of the shade lines, and only the ordinary spots are marked; in another both are emphasized by black scales and very clearly seen; between these extremes the other specimens range. The lack of antennal pectinations in this species has been already referred to as distinctive. I have two female examples in which the primaries are almost lanceolate, and the secondaries are white. The

maculation is exactly that above described, and did they come from the same region I would consider them as belonging with my male examples, but they come from Texas, in April, and the differences are sufficient to leave me in doubt; therefore, the examples are merely mentioned as possible females of *roseola*..

EXPLANATION OF PLATE III.

- | | | |
|-----|-----------------------|-------------------------------|
| 1. | Harpe of clasper of ♂ | <i>Trichoclea postica</i> . |
| 2. | " " ♂ | " <i>nova</i> . |
| 3. | " " ♂ | " <i>antica</i> . |
| 4. | " " ♂ | <i>Nephelodes tertialis</i> . |
| 5. | " " ♂ | " <i>violans</i> . |
| 6. | " " ♂ | " <i>pectinata</i> . |
| 7. | " " ♂ | <i>Fishia exilirata</i> . |
| 8. | " " ♂ | " <i>yosemitæ</i> . |
| 9. | " " ♂ | <i>Pleroma bonuscula</i> . |
| 10. | " " ♂ | " <i>obliquata</i> . |
| 11. | " " ♂ | <i>Hadena pausis</i> . |
| 12. | " " ♂ | " <i>mactata</i> . |

